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June 12, 1998



**VIA HAND DELIVERY**

Ms. Magalie Roman Salas, Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, DC 20554

Re: Ex Parte Submission in CC Docket No. 97-121; CC Docket No. 97-137; CC Docket No. 97-231; CC Docket No. 97-208

Dear Ms. Salas:

On June 12, 1998, MCI submitted the attached cover letter, MCI's Response to OSS Questions, and ATIS-Sponsored Ordering & Billing Forum presentation regarding OSS functions to Jake Jennings of the Common Carrier Bureau.

Two copies of this Notice are being submitted to the Secretary of the FCC in accordance with Section 1.1206(a)(2) of the Commission's rules.

Sincerely,

Karen Reidy

Karen T. Reidy

Attachments

cc: Jake Jennings

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**VIA HAND DELIVERY**

Jake E. Jennings
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Dear Jake:

Attached is MCI's response to the OSS questions that you raised in our meeting last month to discuss SWBT's OSS and performance standards. I apologize for the delay in getting back to you. The questions you asked were: 1) what functions are included in the different industry standard versions of EDI and also in SWBT's current version of EDI; 2) what functions are being considered by the industry for future versions of EDI that are important to MCI, and 3) what level of effort is required for a CLEC to move from one version of EDI to another.

Also as an aid in answering these questions, I have attached a document put together by Ordering and Billing Forum ("OBF") that summarizes at a high level the role of the OBF and the status of industry standards with respect to each OSS function.

If you have any additional questions, please feel free to call.

Sincerely,

Karen Reidy

Karen T. Reidy

Attachments

## MCI's Response to Questions Regarding OSS

What Functions are Included in the Different Industry Standard Versions of EDI?

The attached OBF document[1] contains a series of charts which list some of the most important functions contained in each version of the industry standard[2]. The charts only include versions of EDI from 7.0 forward, because 7.0 was the first to be based on an industry standard ordering guideline.

Based on the charts, which begin on page 19 of the document, it is relatively easy to ascertain the most important functional additions to each subsequent version of EDI.[3] To highlight some of these additions, EDI 8.0 is the first version to contain functionality for ordering loop/port combinations, trunk switch ports, complex directory listings, and some complex resale services such as ISDN and private lines. It is also the first version to contain functionality to provide local number portability (LNP as opposed to ILNP)

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[1] Summary of Industry Guidelines for Operations Support Systems Functions, Developed by ATIS-Sponsored Ordering & Billing Forum (OBF), dated May 1998. This document can be accessed on Internet, http://www.atis.org/atis/clc/obf/obfhom.htm.

[2] The columns in the charts parallel the process by which the industry agrees on how a particular item will be ordered. The first step in this process requires the OBF to create a form that must be filled out to order a particular item. The OBF defines the business rules and each of the fields that are necessary to complete a service order and makes these part of the form. After the OBF designs the form and the business requirements associated with each form, it then reaches initial agreement, and then final agreement on the form -- these three stages are designated in the attached charts under the column for "OBF status." For each item to be ordered, the charts also list which Local Service Request ("LSR") version first contained the form that has been agreed upon for ordering the item (e.g., the form for ordering loops was part of LSR version 1). When an item is to be ordered via EDI, the OBF forwards the form for ordering that item to the EDI Service Order Subcommittee ("SOSC") which maps the information from the LSR form into an EDI format that can be exchanged through electronic means.

[3]The changes to EDI are generally based upon changes made to the underlying LSR ordering forms and simply reflect what is necessary to implement those changes in EDI. Indeed, changes to the LSR sometimes require changes to the backend systems of the LECs without any accompanying changes required in the EDI interface itself.

although this functionality has proven to be incomplete and will need to be supplemented with additional functionality in EDI 10.0 in order to provide LNP satisfactorily (something that is not reflected on the charts).[4] EDI 9.0, for which final specifications were approved in April and for which Telecommunications Industry Forum balloting is expected to be completed within weeks, will add further important functions. These include pre-ordering functionality, jeopardy notifications (called delay notices on the charts), and Centrex ordering.

What Functions are being Considered by the Industry for Future Versions of EDI that are Important to MCI?

The attached OBF charts also list some of the functions that the OBF is considering for future versions of the LSR and future EDI releases. MCI anticipates that many of these functions, as well as some others that MCI believes are particularly important, will be included in EDI 10.0. MCI would urge that a BOC be required to provide all of the functionality that will be included in EDI 10.0 before it's section 271 application could be favorably considered. EDI 10.0 is the first version of EDI that will provide functionality that covers the range of functions now known to be essential for local competition, although, it may become apparent that other functions are vital to local competition as MCI's experience in the local market grows. The anticipated date of final industry balloting for EDI 10.0 is the late first quarter of 1999, but if a BOC desires to

[4]The specified inputs for many of the fields in EDI 8.0 will have to be altered and new fields added. For example, EDI 8.0 lacks a field for inputting whether the number to be ported is a working telephone number or a telephone number reserved for future use -- information necessary in order to port a reserved telephone number. Such a field will have to be added in EDI 10.0.

enter in-region long distance earlier, it needs to provide the functionality that will be included in that version before the industry standardizes the means for doing so.

These functions include the following:

For pre-ordering, the important functions expected to be added in EDI 10.0 include:

- CSR parsing;
- Directory queries (a process that will enable CLECs to view a customer's current directory listing), and
- UNE service provider inquiry (a process that will enable CLECs to know which aspects of a UNE customer's service are being provided by different CLECs).

For ordering, the important functions expected to be added in EDI 10.0 include:

- "Directory listing as-is" ordering associated with UNEs -- a process that allows a CLEC to submit an order for the BOC to switch a UNE customer, who wants to keep his existing directory listing, to the CLEC without filling out the complicated information needed to order a directory listing;
- A combined form to switch a customer to a CLEC and order directory service (straight line only) for that customer, and
- Additional functionality needed to make local number portability operate adequately (until this functionality is provided, BOCs will likely attempt to employ non-standard work-arounds to provide adequately functioning local number portability).

For provisioning, important functionality expected to be added in EDI 10.0 includes:

- Loss notification for unbundled elements -- the process by which a carrier is informed by the BOC that one of its UNE customers has switched to another carrier;
- Completion notification -- the process by which the BOC informs CLECs that an order has been completed (which, although some BOCs have provided in some form using proprietary solutions) will be provided for the first time in a standard manner with standard information; and
- A list of standard error codes so that reject messages are readily comprehensible.

These functions are vital both to provide parity and to enable CLECs truly to have a meaningful opportunity to compete. A CLEC must, for example, be able to order service for a customer using unbundled loops and request that the customer's directory listing remain the same. Otherwise, the CLEC will have to submit a new directory listing order for the customer. Submitting a new directory listing order is both a time consuming and an error prone process given the complexity of the directory listings of many business customers and the complex process for ordering such listings. Because businesses are unlikely to forgive CLECs for any mistakes made in their directory listings, a process of ordering directory listing "as-is" for UNE customers is essential for CLECs to have a meaningful opportunity to compete.

Loss notification is another example of essential functionality projected to be provided in EDI 10.0. A CLEC must receive rapid loss notification when one of its customers returns to the BOC; otherwise, the CLEC will not know when to stop billing the customer, and the customer will likely receive overlapping bills for some period of time. The BOC of course knows to stop billing the instant that one of its customers switches to a CLEC. Thus, rapid loss notification, like directory listing as-is, and the other functions listed above, is an essential prerequisite to § 271 entry.

What Functions are included in SWBT's current version of EDI?

The OBF charts only list functions contained in industry standard versions of EDI. They do not set out the functionality currently offered by BOCs in any proprietary versions of EDI including the one discussed in our meeting on SWBT last month -- SWBT's modified version of EDI 6.0 ("6+"). The functionality in 6+ can readily be

understood, however, by using the charts of industry standard versions of EDI as a baseline of comparison. Of the functions listed on the charts as provided in industry standard versions of EDI for resale ordering (p.20), SWBT's 6+ provides functionality for POTS (basic exchange) but nothing else (no ISDN, private lines, frame relay, etc.). Of the functions related to ordering of unbundled elements (p.21), SWBT's 6+ contains functionality for ordering loops, line switch ports, loops plus line switch ports, and trunk switch ports but does not contain functionality for ISDN switch ports or other listed items. Of the functions related to ordering of directory listings (p.22), SWBT's 6+ contains straight line listings but nothing else (no complex listings, captions, directory assistance). Of the functions related to number portability (p.22), SWBT's 6+ contains functionality for ILNP but not LNP. Of the functions related to provisioning (p.25), SWBT's 6+ contains functionality for FOCs and completion notifications but nothing else (no jeopardy notification referred to as "called delay notification" on the chart). In addition, with the exception of completion notification, SWBT's 6+ does not contain any of the important functionality MCI expects to be included in EDI 10.0 (functionality described in the previous paragraph). Thus, SWBT's 6+ contains some, but certainly not all, of the functionality needed to provide ordering and provisioning functions at parity.

SWBT is in the process of migrating to EDI 8.0. As a result, an assessment of whether SWBT provides sufficient functionality through EDI will no longer depend on the functionality provided by SWBT's 6+. However, the fact that SWBT now offers 6+, a proprietary version of EDI, will continue to be relevant to an assessment of SWBT's operational readiness because, as discussed below, the transition from 6+ to 8.0 is one that will require significant effort on the part of CLECs.

What Level of Effort is Required for a CLEC to Move From One Version of EDI to Another?

The amount of effort required to migrate from one version of EDI to another is the result of many factors. Each subsequent version of EDI contains new functionality and also modifies fields related to functions already provided in the current version of EDI (often correcting deficiencies found in the current version). The amount of effort to change from one version of EDI to another depends on the extent of these modifications and also on a choice by a CLEC of which of the new functions it intends to use.[5] For example, EDI 9.0 provides jeopardy notifications for the first time. If a CLEC chooses to receive jeopardies through EDI as MCI intends to do (or is required by a BOC to begin receiving jeopardies in this manner), the process of migrating to EDI will involve modifying the EDI interface to allow receipt of jeopardies via EDI and may also involve modifications to backend systems.[6] Completing the migration to EDI 9.0 will thus take longer, and potentially much longer if backend systems are involved, than if the CLEC was not going to employ this new functionality.

In addition, the process of migrating from one version of EDI to another is not simply a matter of the CLECs and BOCs each independently adapting their own systems to the new version. An industry standard version of EDI will generally require some

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[5]In the early stages of efforts to establish OSS for local competition, the industry has added basic functionality to successive versions of EDI as rapidly as it is able. This has made the functional differences between versions of EDI greater now than they are likely to be subsequently. The effort to move from one version of EDI to the next is therefore greater now than it is likely to be in the future.

[6]Many of the modifications to backend systems will result from changes/additions to the LSR forms regardless of whether any modifications are required to the EDI interface. Indeed, the more fundamental changes are actually between LSR versions rather than EDI versions. Generally, the changes in EDI merely reflect changes in the LSR.

modification to operate with the backend systems of a particular BOC and particular CLECs. In order to implement a new version of an EDI interface between complex backend systems of the BOC and CLEC, a cooperative process is necessary based on recognized principles of change management.

The basic stages for migrating between versions of an EDI interface are as follows:

*Notification and Analysis.* The BOC notifies MCI of its pending software release and provides documentation of its internal processes, business rules, and a preliminary or working version of the specifications for the interface. MCI must review and assess this documentation.

*Negotiation.* The parties negotiate the details of the interface and schedule its implementation and testing. During this stage it is critical that the BOC not be permitted to decide unilaterally when the documentation for an interface is complete and sufficient for development. Otherwise, the BOC could present an incomplete and inaccurate set of specifications to which MCI could not possibly code. The final documentation must be the product of a cooperative negotiation, not a unilateral mandate.

At this stage, MCI must be allowed to conduct connectivity testing to ensure that its systems are electronically linked to the BOCs, and preliminary validation testing can be conducted. Preliminary validation testing involves manually creating EDI transactions to verify the accuracy of the specifications prior to finalizing design and software coding. This stage should culminate in a final and complete set of specifications and business rules for the interface.

It is after this stage that the principles of change management become essential. This is so because once the negotiations end and the design and construction of the necessary software begins, the costs of modifying the specifications and business rules increase dramatically. The critical decisions must be made during the negotiations.

*Design.* Next, MCI must design its internal systems and its side of the interface consistent with the agreed upon specifications and business rules.

*Construction.* MCI begins constructing the systems, coding to the specifications and creating the necessary software and hardware to implement the interface. The parties will also conduct internal tests of their systems at this point.

*Testing.* Once the parties on both sides of the interface have the necessary systems in place and they have been connected, then the interface itself must be tested. This involves (1) system integration testing of upstream and downstream systems, in which the systems are tested end-to-end; (2) production acceptance testing, in which MCI ensures that the interface meets its business needs; and (3) beta or actual operational trials with a limited number of live accounts.

Testing always reveals problems, so a troubleshooting period must follow the tests. For obvious reasons, MCI cannot be asked to go into live production until these problems are solved. Thus, the BOC must commit whatever time and resources are needed to ensure that the problems are addressed and that the systems are fully functioning when MCI moves into the market.

In addition to the testing and troubleshooting, the parties must finalize all production procedures and business processes, develop a user's guide, and train their employees prior to deployment.

*Deployment.* The final stage is deployment of the interface. Only when the testing and problem resolution stage is completed, and the parties are satisfied that the interface and their employees are ready to handle commercial traffic can a system move into production. The principles of change management now become even more important because even the smallest change to one side of an interface may render it inoperable.

The development process outlined here is only a model. Actual development will vary with the nature of the interface and its required functionalities, the progress made to date on its specifications by industry standards bodies, and the particular agreements reached by the parties themselves. It is important for MCI that the development process follow a cooperative model that includes all of the basic elements outlined above. In following this model, a reasonable estimate of the amount of time it will take to move from one industry standard version of EDI to another, after final specifications have been received and if only incremental changes in functionality are included in the new version, is six months.

With respect to the migration from SWBT's 6+ to industry standard 8.0, the migration will be more difficult than migration between two industry standard versions.

Because 6+ deviates significantly from industry standards with respect to use of particular fields (in addition to containing functionality that is an amalgam of different industry standard versions), the change from 6+ to 8.0 is greater than would be the change from industry standard 7.0 to 8.0 or from 8.0 to 9.0. Nonetheless, based on the expedited schedule required by the Texas PUC, which is resulting in an extremely concentrated effort by MCI to create a functioning version of EDI 8.0, the migration to 8.0 should be completed significantly earlier than would otherwise be the case. SWBT has recently provided MCI specifications with which to begin accomplishing that migration. If everything proceeds smoothly, testing of EDI 8.0 is scheduled to begin on August 3 with an interface available for commercial use scheduled to be ready, per the order of the Texas PUC, on October 15.

June 12, 1998

# Summary of Industry Guidelines for Operations Support Systems Functions

*Developed by the ATIS-Sponsored Ordering & Billing Forum*


**Dianne Moore**
**Ordering and Billing Forum Moderator**
**(MCI)**

**Gwendolyn Shaw**
**Ordering and Billing Forum Assistant Moderator**
**(Ameritech)**


**For more information on the work of OBF Committees, visit:**
***http://www.atis.org/atis/clc/obf/obfhom.htm***

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Updated: May 19, 1998

# Overview

- **Overview of the Alliance for Telecommunications Industry Solutions (ATIS)**
- **Overview of the Ordering and Billing Forum (OBF)**
  - Mission
  - History
  - Structure
  - Process
- **Role of OBF in Addressing Issues for Access to Operations Support Systems ("OSS") for Local Competition**
- **Specific OBF Committee Involvement**
- **Summary of OBF Work**

# ATIS Mission

- Timely resolution of national and international telecommunications issues
- Initiate and maintain flexible, open industry forums to address technical and operational issues
- Information source to its members
- Promote industry progress with minimal regulatory intervention

# ATIS Scope

- **Sponsors 9 Committees/Forums**
- **2500+ participants/500 companies**
- **Membership: North American (U.S., Mexico & Canada) and World Zone 1 Caribbean telecommunications service providers, resellers of those services, enhanced service providers and manufacturers**
  - » *Membership expanded January 1998 to include providers of operations support used in the provision of such telecommunications services*

# OBF Mission

- To provide a forum for customers and providers in the telecommunication industry to identify, discuss and resolve national issues which affect ordering, billing, provisioning and exchange of information about access service, other connectivity and related matters

# OBF History

- Established in 1985 for ordering and billing of access services
- Mission and scope expanded by consensus to include local competition issues in May 1995
- First local competition issues introduced at that time
- Throughout its history, OBF has resolved over 1300 issues

# Seven OBF Standing Committees

## Structure of the OBF:

- Billing (BLG) Committee
- Directory Services Committee (DSC)
- Ordering and Provisioning (O&P) Committee
- Message Processing (MSG) Committee
- Subscription (SUB) Committee
- Telecommunications Services Ordering Request (TOR)
- SMS/800 Number Administration Committee (Not addressing local competition issues)

# OBF Process

- **Participation: 500+ representing 90+ companies**
- **Meeting Frequency: quarterly in week-long General Session; Interim meetings scheduled to meet work load**
  - Activity virtually on-going
- **Nature of Outputs: design of or changes to business processes which include:**
  - Specific interface guidelines
  - Informational requirements

# Issues

- **Introduced and championed by forum participants**
  - Business problem explained
  - Supporting details provided
  - Desired resolution described
- **Criteria for Issue Acceptance**
  - National in Scope
  - More than one interest group impacted
  - No solution exists
- **Issues prioritized, scheduled on published agendas, worked in open committee meetings, and documented in notes**
- **Resolutions reached through consensus process**

# Issue Resolution Process

- Two stages of closure, Initial and Final, provide the industry ample safeguards and periods for review, input and alteration of a resolution
- An issue usually takes multiple meetings from the time it is first discussed to reach final resolution
- Amount of work has been massive
- Most OBF participants have other responsibilities at their companies

# Resolution Implementation Expectations

- **Based on history, implementation is recommended at the first step of closure called "Initial Closure"**
  - Not possible with referred issues
- **Implementation is voluntary but there is an expectation of good faith participation in reaching resolutions**
- **Companies need to contact other companies to confirm and coordinate implementation of the resolutions**

# OBF Committees' Involvement In Local Competition OSS

| Process | OBF Committee Involved |
|---|---|
| Pre-Ordering | O&P/TOR |
| Ordering/Provisioning | O&P/TOR/SUB/DSC |
| Billing | BLG/MSG |

# Other ATIS Forum Involvement

- Network Interconnection and Interoperability Forum (NIIF) - repair and maintenance
- Telecommunication Industry Forum (TCIF) Electronic Data Interchange (EDI) Committee - data modeling
- TCIF's Electronic Communication Implementation Committee (ECIC) - communications platforms

# Inter-Forum Liaison Created for Ordering OSSs

- **OBF Committees are responsible for the business process flows, interface guidelines, and informational requirements**
  - Create Local Service Ordering Guideline (LSOG) and Local Service Request (LSR) forms
  - LSR Version 3 released April 1998
  - LSR Version 4 due for release February 1999
- **The EDI Committee is responsible for some data modeling**
  - LSR Version 2 in EDI Issue 8 published February 1998
  - Included LSR Version 3 in EDI Issue 9 ballot expected to be final June 1998
- **The ECIC suggests communications platforms to the OBF (e.g., TCP/IP, SSL3, OSI)**